

Powder-coated stainless steel pans for mosquito larvae

Background:

Many mosquito laboratories have had difficulty finding the low-profile white metal pans that laboratories have used for years to culture mosquito larvae. The white color is a desirable characteristic that simplifies observing the water quality and number and stage of larvae, and the pans were a convenient size.

Solution:

After many futile attempts to find inexpensive (and expensive) plastic replacements, we settled on a stainless steel commercial food tray that we had powder coated. These trays are very attractive, standard sizes, can be coated any color you wish, and have withstood autoclaving for several months with no sign of deterioration. Most importantly, the MR4 vector component has had success culturing larvae in these with no apparent effect on larval health.

Following is a description of the process we obtained from Benise-Dowling & Associates (Decatur, GA USA) who performed the work:

*(The material was) "...Dupont Powder Sky White TGIC Polyester Powder. We have a 5 stage pretreatment with iron phosphate that all parts are put through to clean before powder coating and curing at 375°F."*¹

The only modification of the pan required for the process was a small hole that was drilled into one corner so that it could be suspended for processing.

The powder coating process is quite inexpensive: in 2004, we paid \$375.00 US to have 100 trays coated.

The pans we used are ¼ size and come in various depths. They can be purchased from most commercial food service suppliers.



¹ (This description is not meant to be an official endorsement of either Benise-Dowling & Associates or Dupont. Many companies perform powder-coating services and can be found easily in the phone book or on the internet.).